operates with respect to the sorted list in memory **308** to properly update that list. After block **1406** has transmitted the octet, control is transferred back to block **1401**.

Returning to decision block **1403**, if the octet, that is ready, is a low energy octet, control is transferred to decision block **1408**. The latter decision block determines if the queue is above or equal to a predefined capacity. At or above this capacity, a low energy octet will be deleted if it is the lowest energy octet presently in the queue. If the answer in decision block **1408** is no, control is transferred to block **1406**. If the answer in decision block **1408** is yes, decision block **1409** determines if the octet, that is ready, is the lowest energy octet in the queue. If the answer is no, control is transferred to block **1406**. If the answer in decision block **1409** is yes, block **1411** deletes the octet, gets another octet and transmits that octet to the PHY before transferring control to block **1413**. Block **1413** recalculates the sorted list stored in memory **308** of FIG. **3** to properly update it and to properly position it for the removal of two octets before transferring control back to block **1401**.

Of course, various changes and modifications to the illustrative embodiment described above will be apparent to those skilled in the art. Such changes and modifications can be made without departing from the spirit and scope of the invention and without diminishing its intended advantages. It is therefore intended that such changes and modifications be covered by the following claims except in so far as limited by the prior art.

What is claimed is:

1. A method for compensating for unsynchronized data transmission of synchronous data, comprising the steps of:

receiving samples of synchronous data;

storing the received samples in a queue;

maintaining a sorted list of low energy samples stored in the queue;

comparing a number of the samples in the queue with a predefined capacity of the queue; and

determining a position in the queue of a previously deleted low energy sample;

removing a one of the low energy samples listed in the sorted list from the queue if the number is greater than the predefined capacity upon the one of the low energy samples having lower energy than any other ones of the low energy samples if the one of the low energy samples is a predefined distance in the queue from the previously deleted low energy sample; and

selecting another one of the low energy samples having the next lowest energy than any other ones of the low energy samples to be removed if the one of the low energy samples is not the predefined distance from the previously deleted low energy sample and the other one of the low energy samples is the predefined distance from the previously deleted low energy sample.

2. The method of claim **1** wherein the step of removing further comprises the step of updating the sorted list to reflect the deletion of the one of the low energy samples.

3. The method of claim **1** wherein the step of determining the position comprises the step of updating the position in the queue of the previously deleted low energy sample.

4. The method of claim **1** wherein the step of removing further comprises updating the sorted list to reflect the deletion of the other one of the low energy samples.

5. The method of claim **1** wherein the step of determining the position comprises updating the position in the queue of the previously deleted low energy sample.

6. The method of claim **1** wherein the step of maintaining comprises the steps of determining if one of the received samples is below a predefined energy level;

inserting the one of the received samples into the queue; and

recording the energy level of the one of the received samples in the sorted list if the one of the received samples is below a predefined energy level.

7. The method of claim **6** wherein the step of maintaining further comprises positioning the one of the received samples in sorted list relative to energy levels of the other low energy samples in the sorted list if the one of the received samples is below a predefined energy level.

8. An apparatus for compensating for unsynchronized data transmission of synchronous data, comprising:

a receiver for receiving samples of synchronous data;

a queue for storing the received samples;

a memory for storing a sorted list of low energy samples in the queue;

a low energy detector for storing received samples into the queue and for inserting energy levels of the low energy samples into the sorted list;

a circuit further determines a position in the queue of a previously deleted low energy sample;

the circuit further deleting one of the low energy samples from the queue if the queue has exceeded a predefined capacity of the queue upon the one of the low energy samples having lower energy than any other ones of the low energy samples if the one of the low energy samples is a predetermined distance in the queue from the previously deleted low energy sample; and

the circuit further selects another one of the low energy samples having the next lowest energy than any other ones of the low energy samples to be removed if the one of the low energy samples is not the predefined distance from the previously deleted low energy sample and the other one of the low energy samples is the predefined distance from the previously deleted low energy sample.

9. The apparatus of claim **8** wherein the circuit further updates the sorted list stored in the memory to reflect the deletion of the one of the low energy samples.

10. The apparatus of claim **9** wherein the circuit further updates the position in the queue of the previously deleted low energy sample.

11. The apparatus of claim **8** wherein the circuit further updates the sorted list stored in the memory to reflect the deletion of the other one of the low energy samples.

12. The apparatus of claim **8** wherein the circuit further updates the position in the queue of the previously deleted low energy sample.

13. The apparatus of claim **8** wherein low energy detector determines if one of the received samples is below a predefined energy level, inserts the one of the received samples into the queue, and records the energy level of the one of the received samples in the sorted list if the one of the received samples is below a predefined energy level.

14. The apparatus of claim **13** wherein the low energy detector positions the one of the received samples in sorted fist relative to energy levels of the other low energy samples in the sorted list if the one of the received samples is below a predefined energy level.

15. The apparatus of claim **8** wherein the circuit further determining that the next one of the received samples having the lowest energy of any sample in the queue by accessing the sorted list.

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